

Date: Tuesday, 07/04/2009 10:19:11 AM
 User: Julie Dawson

Process Sheet

| | | | | | | |
|----------------------------------|---------------------------------------|--|---------------------|-----------------------------------------------|---------------|-----------------|
| Customer | : CU-DAR001 Dart Helicopters Services | | Drawing Name | : BEARING | | |
| Job Number | : 46963 | | | Part Number | : D312123 | |
| Estimate Number | : 10089 | | | Drawing Number | : D3121 REV E | |
| P.O. Number | : | | | Project Number | : N/A | |
| This Issue | : 07/04/2009 | | S.O. No. | : | | |
| Prsht Rev. | : NC | | | Drawing Revision | : E | |
| First Issue | : / / | | Type | : PURCHASED PARTS | | |
| Previous Run | : 46850 | | | Material | : | |
| Written By | : | | | Due Date | : 22/04/2009 | |
| Checked & Approved By | : <u>JUL 09.04.07</u> | | | Qty: | 30 | Um: Each |
| Comment | : Est. A: 04.02.19 New Issue KJ/DS | | | Est Rev:B ECN 1060 07-11-12 DD verified by:EC | | |

Additional Product

Job Number:



| Seq. #: | Machine Or Operation: | Description : |
|---------|-----------------------|---------------|
|---------|-----------------------|---------------|

| | | |
|-----|----|------------|
| 1.0 | PG | PURCHASING |
|-----|----|------------|



Comment: PURCHASING

Issue P/O: 8528C469104108 (30)

Bearing as per Dwg D3121

Possible Supplier: SKF P/N: 61900-2Z or KML P/N: 6900-ZZ

Material release note is required

| | | |
|-----|--------|---------|
| 2.0 | 6900ZZ | Bearing |
|-----|--------|---------|



Comment: Qty.: 1.0000 Each(s)/Unit Total : 30.0000 Each(s)

Bearing

| | | |
|-----|-------------|-----------------------|
| 3.0 | PACKAGING 1 | PACKAGING RESOURCE #1 |
|-----|-------------|-----------------------|



Comment: PACKAGING RESOURCE #1

Receive & Inspect for Transit Damage

Ensure Material Release Note is attached

PC 9/4/13 (30)

| | | |
|-----|-----|-------------------|
| 4.0 | QC6 | DIMENSIONAL CHECK |
|-----|-----|-------------------|



Comment: DIMENSIONAL CHECK

Inspect dimensions as per Dwg D3121 and attached certification Dwg Rev

E S 9/4/13 (X30)

| | | |
|-----|-------------|-----------------------|
| 5.0 | PACKAGING 1 | PACKAGING RESOURCE #1 |
|-----|-------------|-----------------------|

(30x)

Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: 2359/4/14SP

Dart Aerospace Ltd

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Date: Tuesday, 07/04/2009 10:19:11 AM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BEARING

Job Number: 46963

Part Number: D312123

Job Number:



Seq. #: Machine Or Operation:

Description :

6.0 QC21

FINAL INSPECTION/W/O RELEASE



09/04/14 JJ

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



U 09.04.14

Dart Aerospace Ltd

| W/O: | | WORK ORDER CHANGES | | | | | | | |
|------|------|--------------------|--|--|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | | | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | | | |
| | | | | | | | | | |

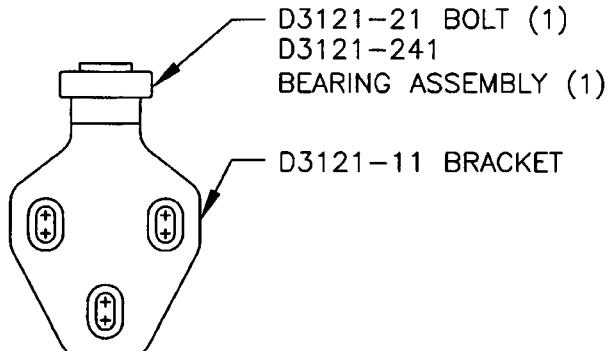
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

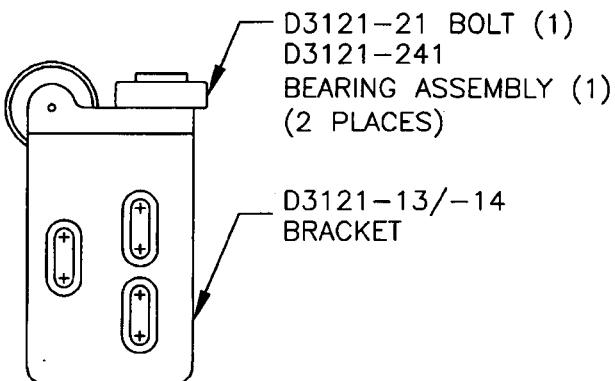
NOTE: Date & initial all entries

DART

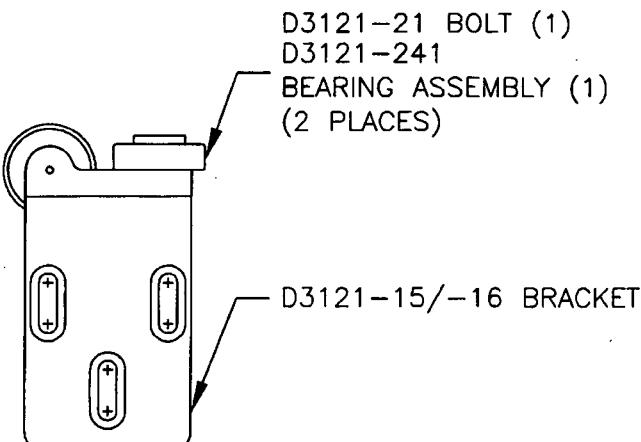
| | | | |
|---------------------|-----------------------|---------------------------------------------------|-------------------------|
| DESIGN <i>#</i> | DRAWN BY <i>CE</i> | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED <i>#</i> | APPROVED <i>#</i> | DRAWING NO. D3121 | REV. E SHEET 1 OF 10 |
| DATE 07.11.07 | | TITLE BRACKET ASSEMBLY | SCALE 1:2 |

RELEASED
07.11.07 *WJD***D3121-041 BRACKET ASSEMBLY**

(REPLACES PREMIER P/N B30-23000-33)

**D3121-043 (SHOWN) / D3121-044 (OPPOSITE)
BRACKET ASSEMBLY**

(REPLACES PREMIER P/N B30-23000-37/-38)

**D3121-045 (SHOWN) / D3121-046 (OPPOSITE)
BRACKET ASSEMBLY**

(REPLACES PREMIER P/N B30-23000-35/-36)

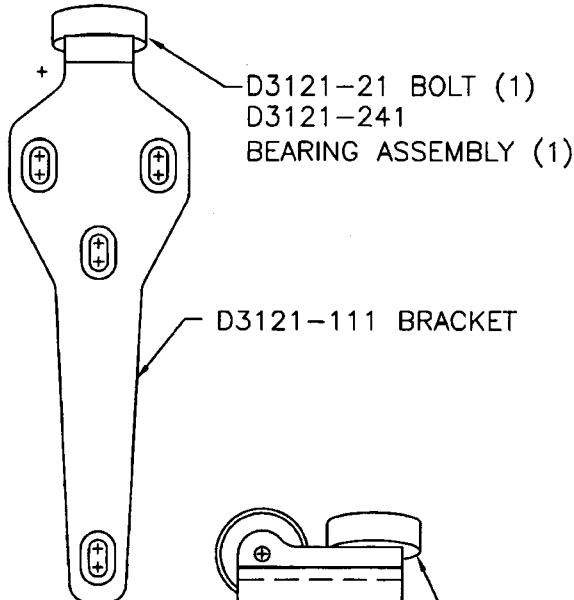
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 400103

Copyright © 2002 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

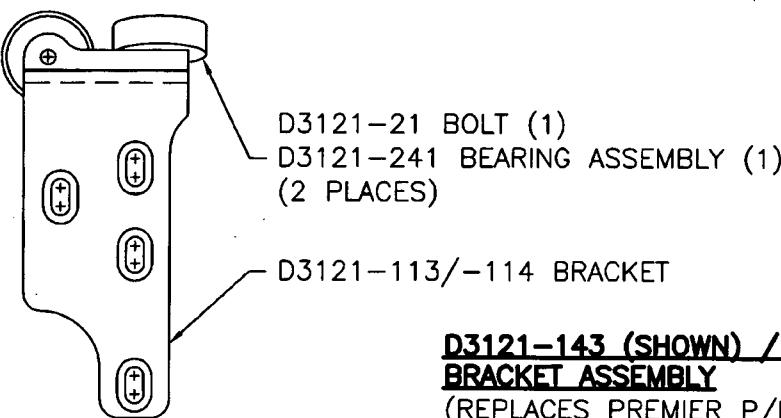
DART

| | | | |
|----------------------|-----------------------|---------------------------------------------------|-------------------------|
| DESIGN <i>CE</i> | DRAWN BY <i>CE</i> | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED <i>CE</i> | APPROVED <i>CE</i> | DRAWING NO. D3121 | REV. E SHEET 2 OF 10 |
| DATE 07.11.07 | | TITLE BRACKET ASSEMBLY | SCALE 1:2 |

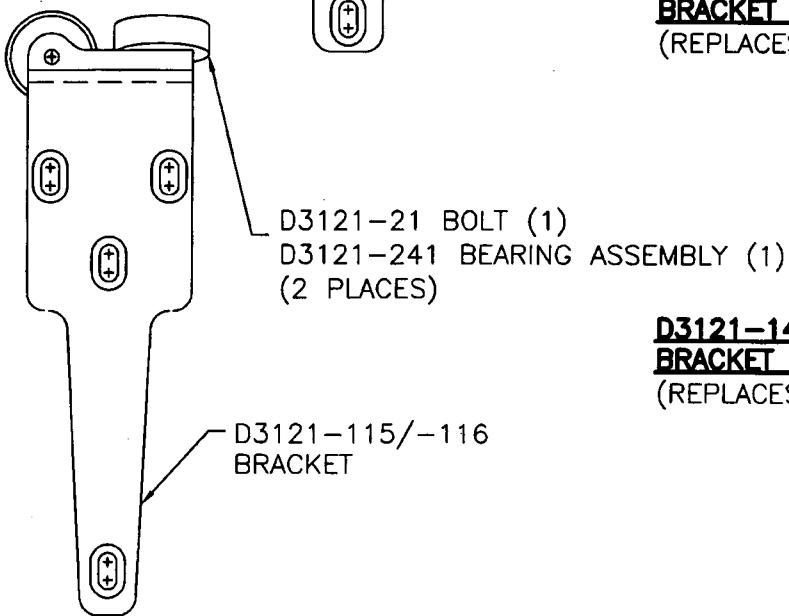


D3121-141 BRACKET ASSEMBLY
(REPLACES PREMIER P/N B30-23001-01)

RELEASED
07.11.07 *W*



**D3121-143 (SHOWN) / D3121-144 (OPPOSITE)
BRACKET ASSEMBLY**
(REPLACES PREMIER P/N B30-23000-03/-04)



**D3121-145 (SHOWN) / D3121-146 (OPPOSITE)
BRACKET ASSEMBLY**
(REPLACES PREMIER P/N B30-23000-05/-06)

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
40063

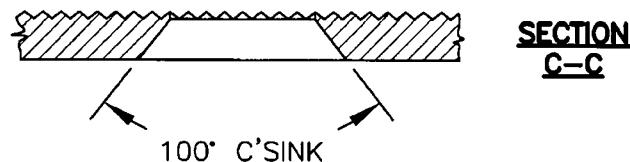
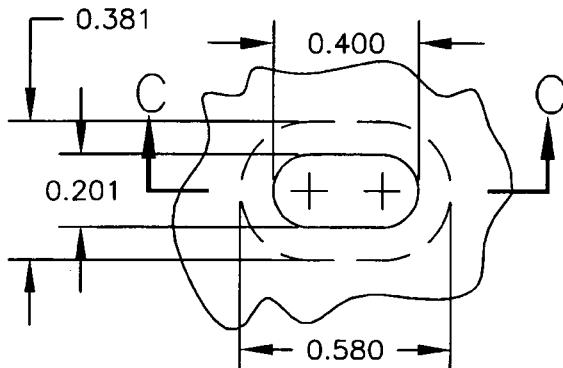
Copyright © 2002 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED
OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

DART

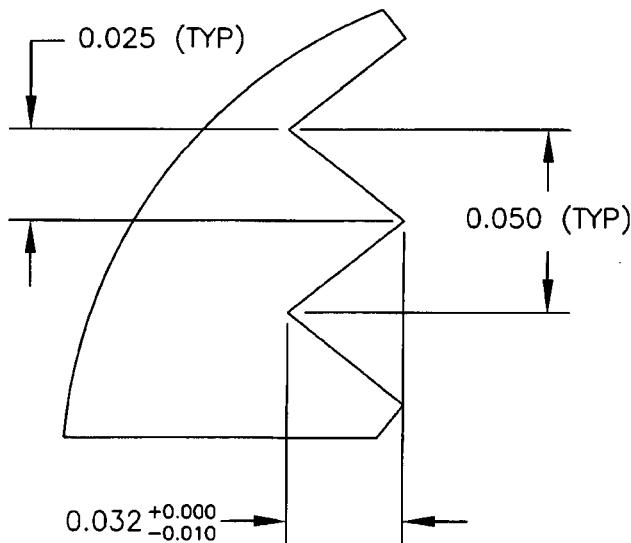
| | | | |
|----------------------|-----------------------|---------------------------------------------------|-------------------------|
| DESIGN <i>AS</i> | DRAWN BY <i>CE</i> | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED <i>AS</i> | APPROVED <i>-#</i> | DRAWING NO. D3121 | REV. E SHEET 3 OF 10 |
| DATE 07.11.07 | | TITLE BRACKET ASSEMBLY | SCALE 1:1 |

DETAIL A:
SLOT DETAIL
SCALE 2:1
VIEW ROTATED



RELEASED
07.11.07 *[Signature]*

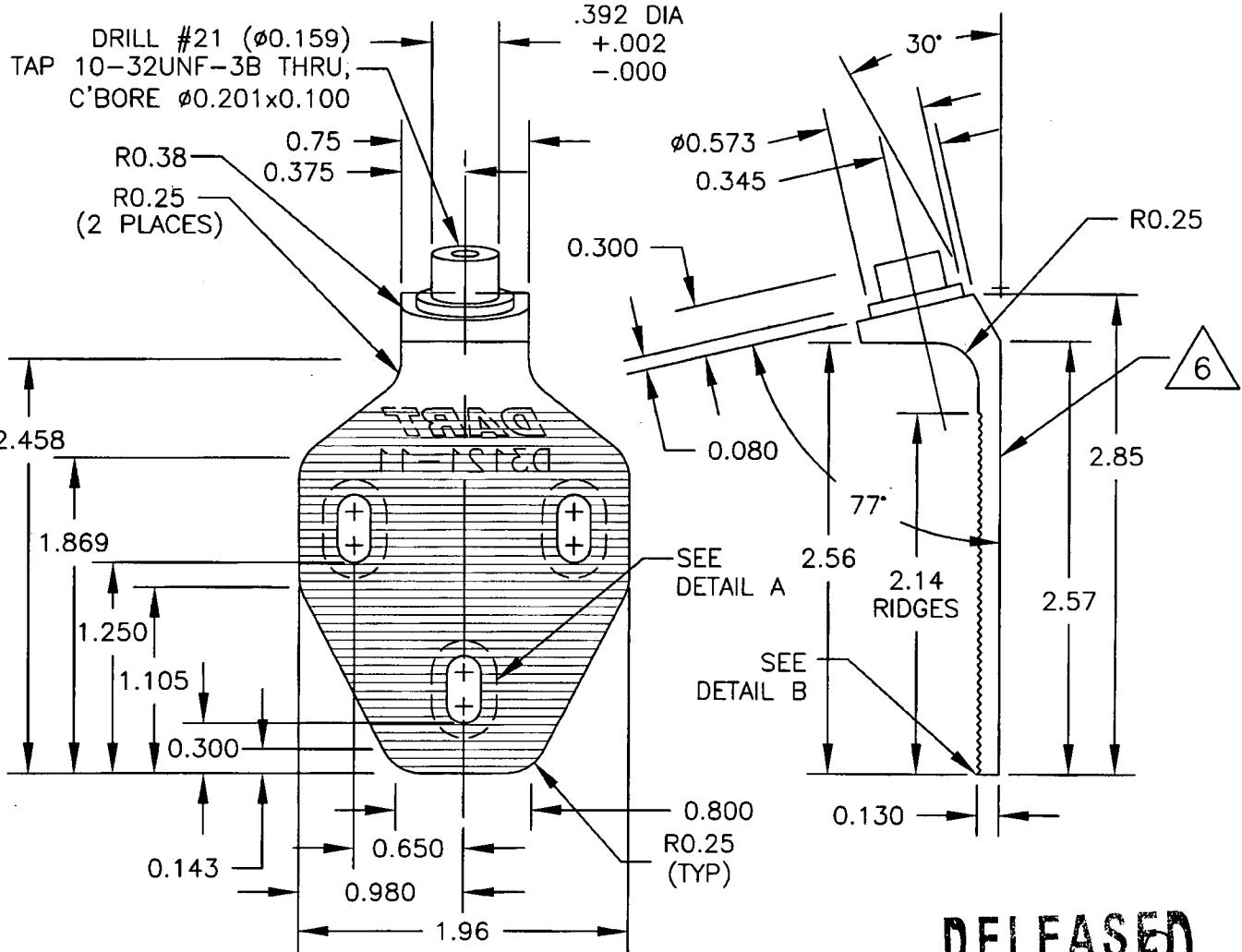
DETAIL B:
RIDGE DETAIL
PARTIAL SECTION
SCALE 1:20



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 46963

DART

| | | | |
|----------------------|---------------------------|---------------------------------------------------|-------------------------|
| DESIGN <i>AS</i> | DRAWN BY <i>CE</i> | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED <i>AS</i> | APPROVED <i>AS</i> | DRAWING NO. D3121 | REV. E SHEET 4 OF 10 |
| DATE 07.11.07 | TITLE BRACKET ASSEMBLY | SCALE 1:1 | |

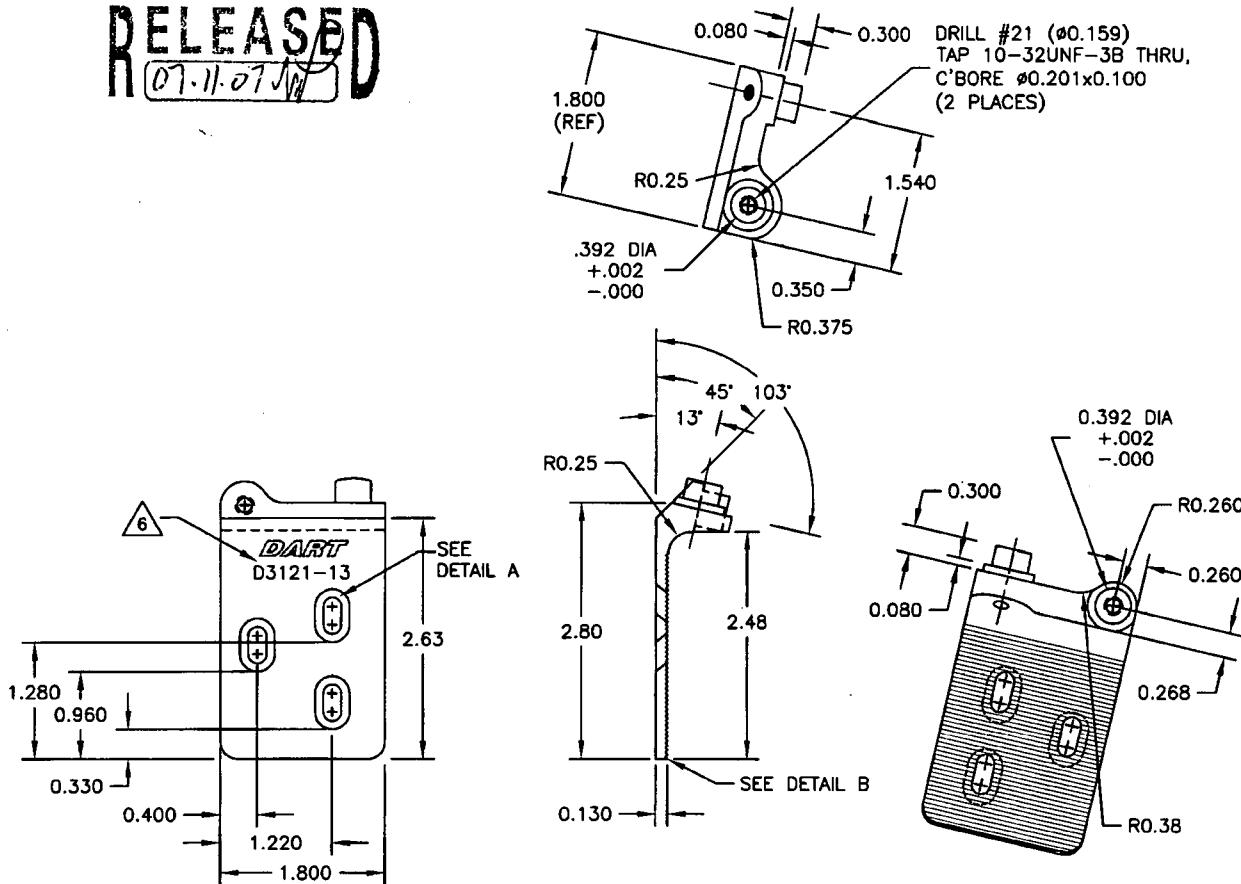
**RELEASED**
07.11.07 *AS***D3121-11 BRACKET**

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE = 150 ksi
MIN YIELD TENSILE = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N & LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK CENTER
NO. *40903*

DART

| | | | |
|---------------------|-----------------------|---------------------------------------------------|-------------------------|
| DESIGN <i>#</i> | DRAWN BY <i>CE</i> | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED <i>#</i> | APPROVED <i>#</i> | DRAWING NO. D3121 | REV. E SHEET 5 OF 10 |
| DATE 07.11.07 | | TITLE BRACKET ASSEMBLY | SCALE 1:2 |

RELEASED
[07.11.07 JVW]**D3121-13 BRACKET (SHOWN)****D3121-14 BRACKET (OPPOSITE)**

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE STRENGTH = 150 ksi
MIN YIELD TENSILE STRENGTH = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N & LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

SHOP COPY

RETURN TO

ENGINEERING

UNCONTROLLED COPY

SUBJECT TO AMENDMENT

WITHOUT NOTICE

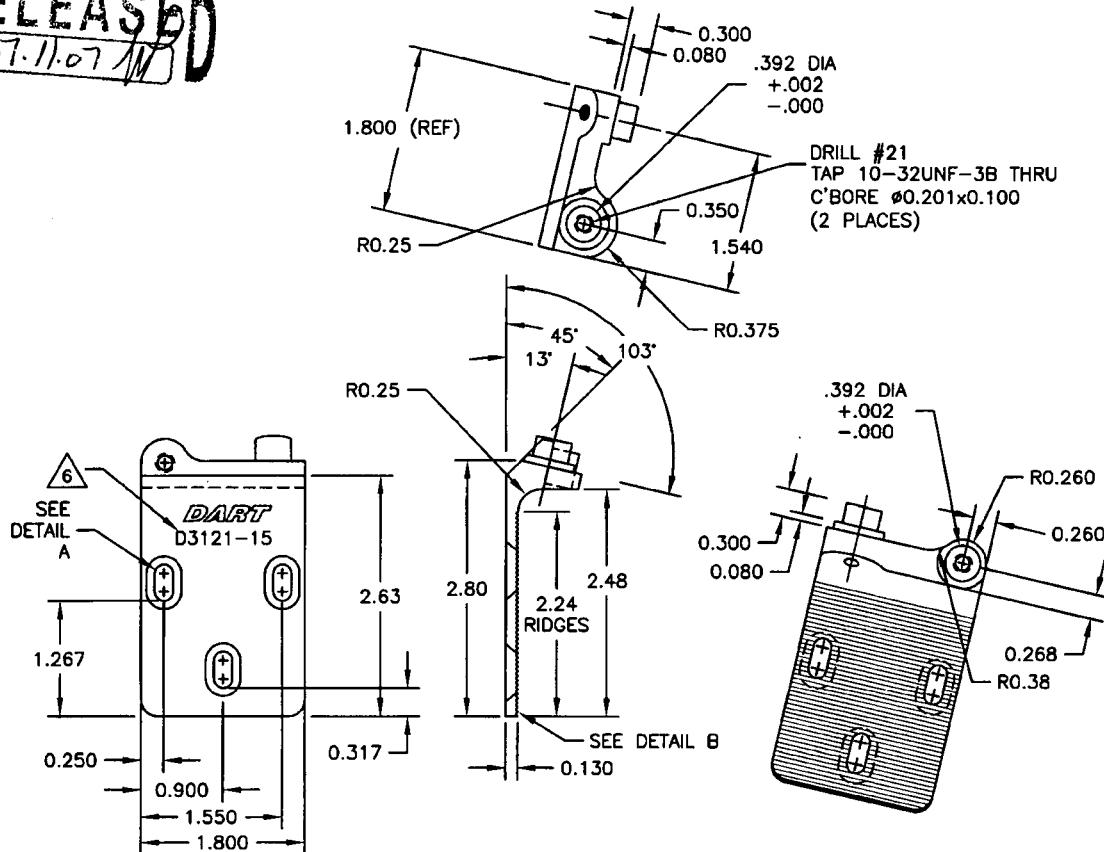
WILSON, GUY

NO. 40903**Copyright © 2002 by DART AEROSPACE LTD**

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

DART

| | | | |
|------------------|--------------------|---------------------------------------------------|-------------------------|
| DESIGN # | DRAWN BY <i>CE</i> | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED # | APPROVED <i>CH</i> | DRAWING NO. D3121 | REV. E SHEET 6 OF 10 |
| DATE 07.11.07 | | TITLE BRACKET ASSEMBLY | SCALE 1:2 |

RELEASED
(07.11.07)

D3121-15 BRACKET (SHOWN)
D3121-16 BRACKET (OPPOSITE)

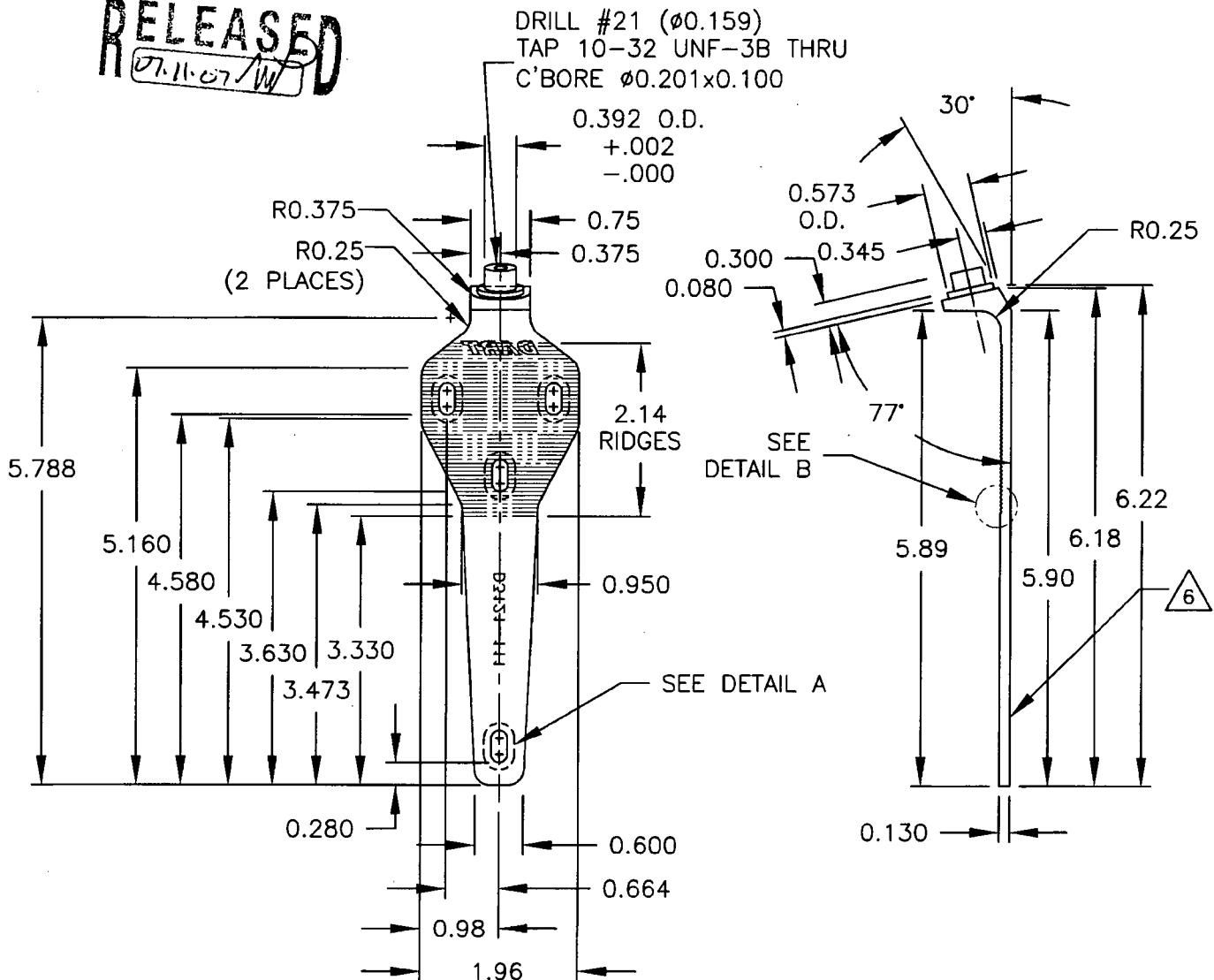
- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)
 MIN ULTIMATE TENSILE = 150 ksi
 MIN YIELD TENSILE = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N AND LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

SHOP COPY
 RETURN TO
 ENGINEERING
 UNCONTROLLED COPY
 SUBJECT TO AMENDMENT
 WITHOUT NOTICE
 WORK ORDER
 NO. 46963



| | | | | |
|----------------------|---------------------------|---------------------------------------------------|--------------|---------------|
| DESIGN <i>AB</i> | DRAWN BY <i>CE</i> | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | | |
| CHECKED <i>AB</i> | APPROVED <i>AB</i> | DRAWING NO. D3121 | REV. E | SHEET 7 OF 10 |
| DATE 07.11.07 | TITLE BRACKET ASSEMBLY | | SCALE 1:2 | |

RELEASED
07.11.07 / W



D3121-111 BRACKET

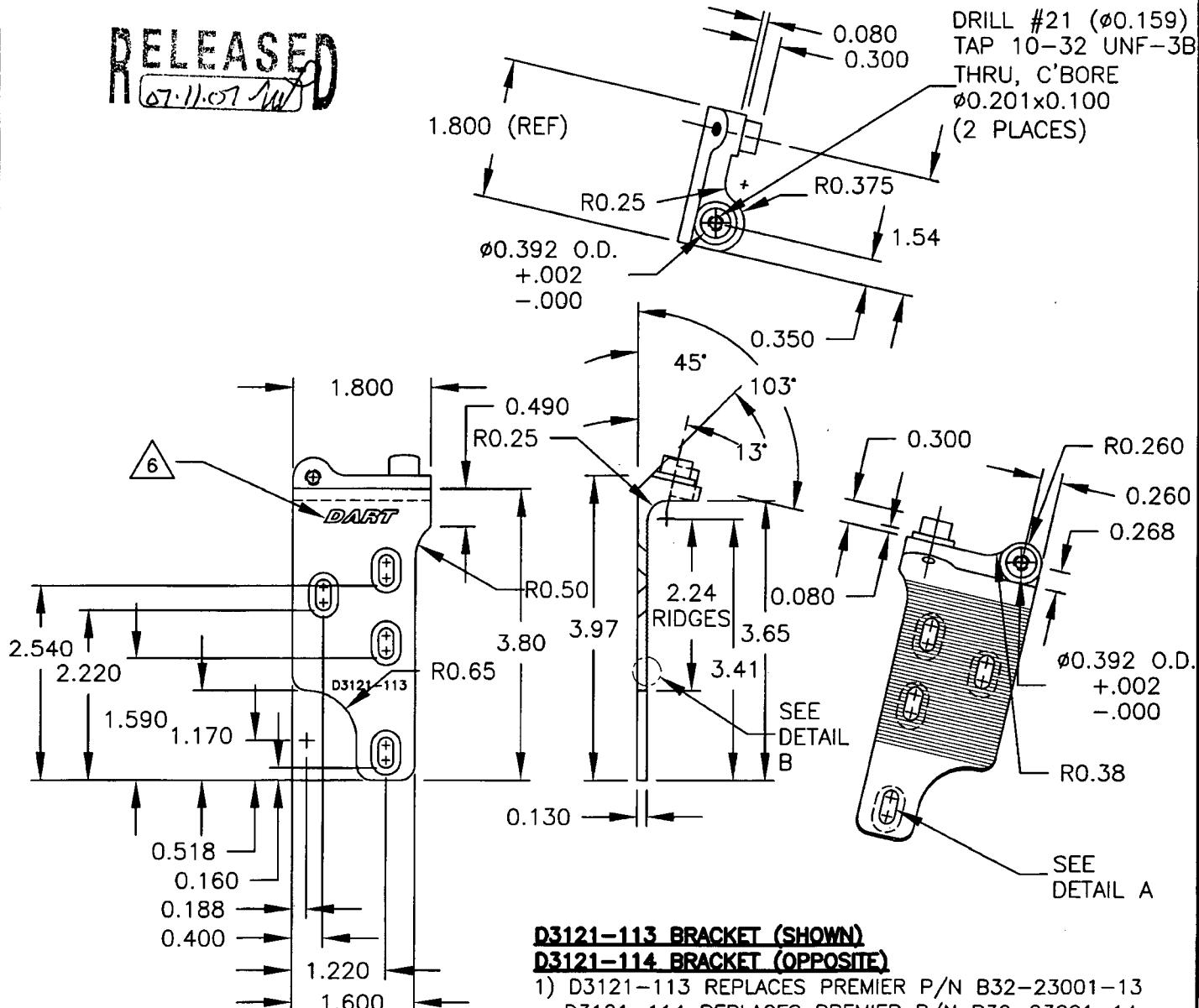
- 1) REPLACES PREMIER P/N B32-23001-11
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE = 150 ksi
MIN YIELD TENSILE = 100 ksi
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
- 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 46916

DART

| | | | |
|----------|------------------|---------------------------------------------------|---------------|
| DESIGN | DRAWN BY | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | APPROVED | DRAWING NO. | REV. E |
| | | D3121 | SHEET 8 OF 10 |
| DATE | TITLE | SCALE | |
| 07.11.07 | BRACKET ASSEMBLY | 1:2 | |

RELEASED
(07.11.07 W)



D3121-113 BRACKET (SHOWN)

D3121-114 BRACKET (OPPOSITE)

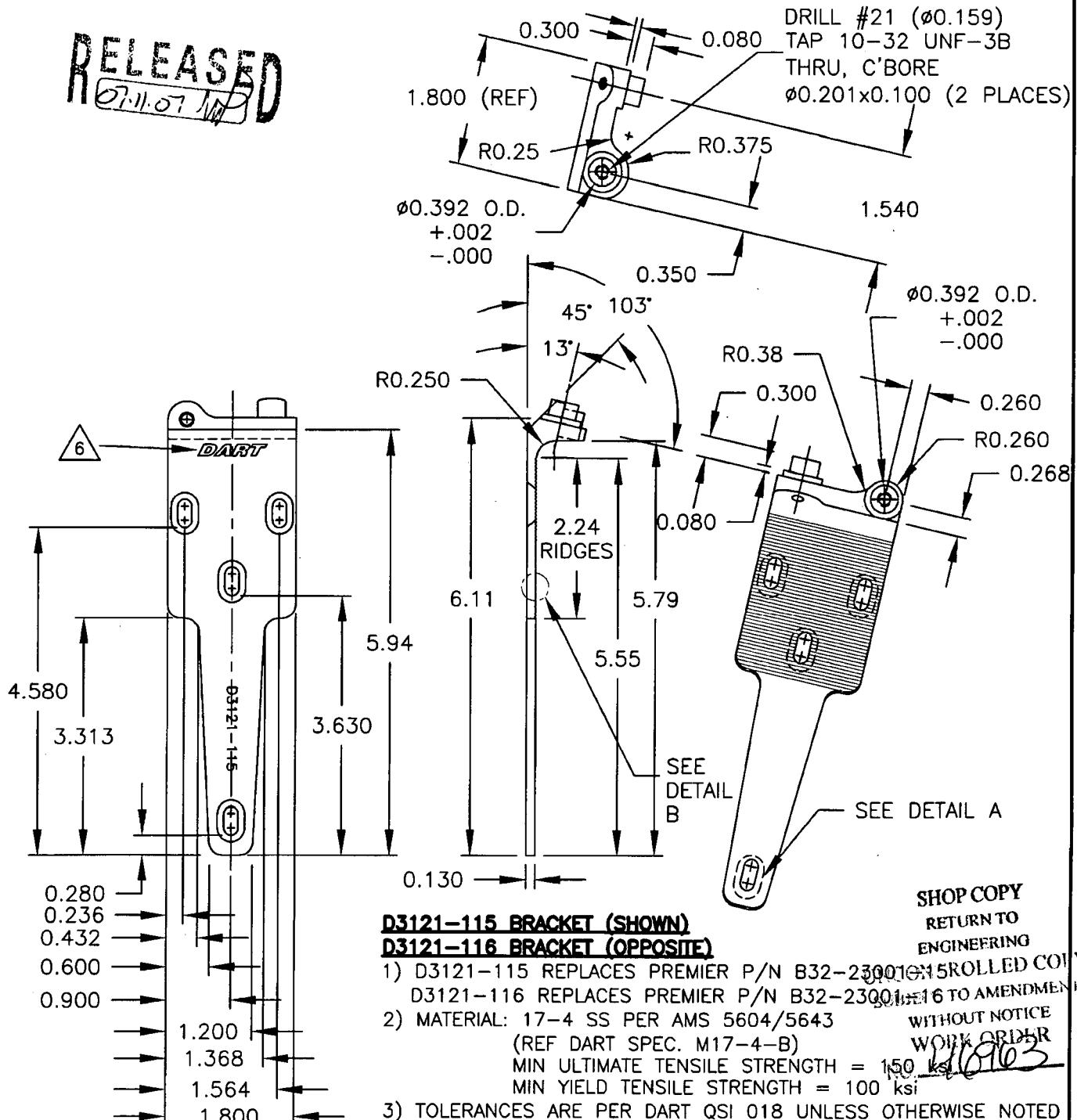
- 1) D3121-113 REPLACES PREMIER P/N B32-23001-13
D3121-114 REPLACES PREMIER P/N B32-23001-14 SHOP COPY
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643 RETURN TO
(REF DART SPEC. M17-4-B)
- 3) TOLERANCES ARE PER DART QSI 018S AMENDMENT
UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES WITHOUT NOTICE
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015 WORK ORDER
- 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN 1102103
- 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005 ENGINEERING
MIN ULTIMATE TENSILE STRENGTH = 150 KSI;
MIN YIELD TENSILE STRENGTH = 100 KSI
CONTINUOUS LOAD TESTED COPY

Copyright © 2002 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

DART

| | | | |
|------------------|-----------------------|---------------------------------------------------|-------------------------|
| DESIGN # | DRAWN BY <i>CE</i> | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED # | APPROVED <i>-</i> | DRAWING NO. D3121 | REV. E SHEET 9 OF 10 |
| DATE 07.11.07 | | TITLE BRACKET ASSEMBLY | SCALE 1:2 |

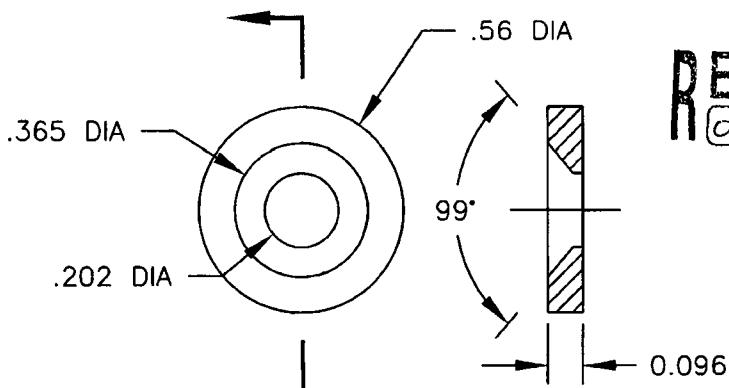
RELEASED
07.11.07 100

Copyright © 2002 by DART AEROSPACE LTD

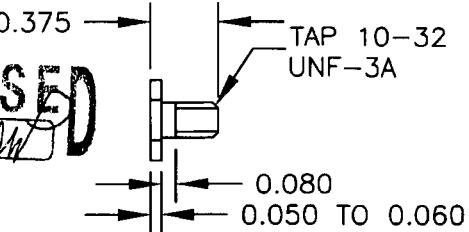
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

DART

| | | | |
|----------------------|---------------------------|---------------------------------------------------|--------------------------|
| DESIGN <i>CH</i> | DRAWN BY <i>CE</i> | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED <i>CH</i> | APPROVED <i>CH</i> | DRAWING NO. D3121 | REV. E SHEET 10 OF 10 |
| DATE 07.11.07 | TITLE BRACKET ASSEMBLY | SCALE 1:1 | |

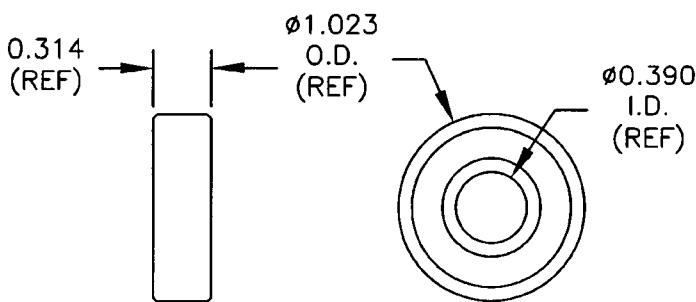


RELEASED
07.11.07 *MW*



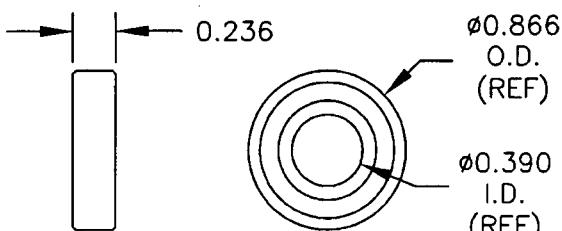
D3121-17 WASHER (SCALE 2:1)

- 1) REPLACES PREMIER P/N B32-23001-17
- 2) MATERIAL: AISI 303 SS ROUND BAR, ANNEALED (REF DART SPEC. M303R)
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015



D3121-19 BEARING (SCALE 1:1)

- 1) POSSIBLE SUPPLIER: KING BEARING P/N 6000-2ZJ/EM
FAFNIR P/N 9100KDD
- 2) ALL DIMENSIONS ARE IN INCHES

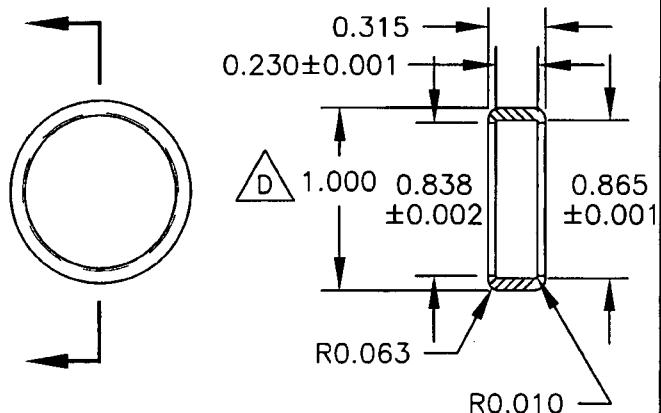


D3121-23 BEARING (SCALE 1:1)

- 1) POSSIBLE SUPPLIER: SKF P/N 61900-2Z
OR KML P/N 6900-ZZ
- 2) ALL DIMENSIONS ARE IN INCHES

D3121-21 BOLT (SCALE 1:1)

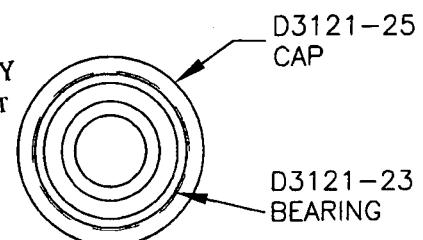
- 1) MATERIAL: AISI 303 SS HEX, ANNEALED (REF DART SPEC. M303H0.500)
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015



D3121-25 CAP (SCALE 1:1)

- 1) MATERIAL: DELRIN ROD, Ø1.25 (REF DART SPEC. M-DELRIN-R1.250)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. *10/10/03*



D3121-241 BEARING ASSEMBLY (SCALE 1:1)

GENERAL BEARING SERVICE

GENERAL BEARING SERVICE
Inc.
One
www.gbs.ca

GENERAL BEARING SERVICE • II

55 * R10197909

SOLD TO: DART AEROSPACE LTD.
1270, ABERDEEN STREET
HAMILTON, ON.
K6A-1K7

SALE MADE BY: DR
SHIP VIA: PICK UP

HAWKESBURY, ON.

SHIP VIA: PICK UP

386 MAIN ST E, HAMMERSBURY, ONTARIO K6A 1R8 (613) 632-3914
ORDER DATE: APR 13, 2009

ORDER DATE: APR 13, 2003

PST LICENCE: 1025-2319

4.89 1 5.7 146.70
7.34

三

PACKING SLIP NO: 4883

1312283